ABSTRAK

SRI HARTATI CANDRA DEWI. Pengaruh Pemberian Gula, Insulin dan Lama Istirahat Sebelum Pemotongan pada Domba setelah Pengangkutan terhadap Kualitas Daging. Dibimbing oleh EDDIE GURNADI, RUDY PRIYANTO dan WASMEN MANALU.

Tujuan penelitian ini adalah untuk mempelajari pengaruh pemberian gula, insulin dan lama istirahat sebelum pemotongan pada domba setelah transportasi terhadap kualitas daging. Penelitian ini menggunakan 54 ekor domba betina dengan kisaran umur antara 10 dan 12 bulan dan bobot hidup antara 14 dan 17 kg. Domba yang digunakan berasal dari Pasirangin, Megamendung, Bogor. Penelitian ini menggunakan rancangan acak lengkap pola faktorial 2x3x3. Faktor pertama adalah pemberian gula dengan 2 level yaitu level 0 dan 6 g/kg dari bobot hidup. Faktor kedua adalah pemberian insulin dengan 3 level yaitu 0, 0,3 dan 0,6 IU per ekor. Faktor ketiga adalah lama istirahat sebelum pemotongan yang terdiri atas 3 level yaitu 2, 4 dan 6 jam. Masing-masing unit percobaan diulang 3 kali. Peubah yang diamati pada penelitian ini adalah suhu rektal dan denyut jantung, penurunan bobot hidup, persentase bobot karkas, kadar glukosa darah, kadar glikogen daging, kadar asam laktat daging, pH, keempukan, daya mengikat air, susut masak dan warna daging.

Hasil penelitian menunjukkan bahwa domba setelah mengalami pengangkutan suhu rektal, denyut jantung dan kadar glukosa meningkat, domba yang disuplementasi dengan gula sesudah pengangkutan, kadar glikogen daging dan kadar asam laktat meningkat tetapi pH daging dan susut masak rendah. Pemberian insulin menurunkan kadar glukosa darah tetapi meningkatkan kadar glikogen daging. Lama istirahat sebelum pemotongan menurunkan berat hidup tetapi meningkatkan persentase karkas. Kadar glukosa darah menurun dengan adanya pengistirahatan sebelum pemotongan. Daya mengikat air, keempukan dan warna daging (L, a, b) tidak berbeda nyata.

Kesimpulan dari penelitian ini adalah pemberian gula, insulin dan lama istirahat sebelum pemotongan pada domba dapat mengurangi pengaruh negatif dari stres karena pengangkutan terhadap kualitas daging.

Kata kunci: gula, insulin, periode istirahat, pengangkutan, kualitas daging, domba
ABSTRACT

SRI HARTATI CANDRA DEWI. The Effects of Sucrose Supplementation, Insulin Injection, and Resting Period Prior to Slaughtering on Meat Quality in Sheep Exposed to Stressful Transportation. Under the direction of EDDIE GURNADI, RUDI PRIYANTO, and WASMEN MANALU.

An experiment was conducted to study the effects of sucrose supplementation, insulin injection, and resting period prior to slaughtering on meat quality in sheep exposed to stressful transportation. Fifty four female local sheep (10 to 12 months of age) with weight ranging from 14 to 17 kg. The experimental sheep were assigned into a completely randomized design with a 2x3x3 factorial arrangement with 3 replications. The first factor was sucrose supplementation with 2 levels (0 and 6 g/kg body weight). The second factor was insulin injection after transportation with 3 levels (0, 0.3 and 0.6 IU/kgBW). The third factor was the duration of resting period with 3 levels (2, 4 and 6 h prior to slaughtering). Parameters measured were rectal temperature and heart rate, live weight, carcass percentage, blood glucose concentration, meat glycogen concentration, meat lactate concentration, meat pH, water holding capacity, meat tenderness, cooking loss and meat color.

The results of the experiment indicated that sheep supplemented with sucrose after transportation had higher meat glycogen and lactate concentration but lower meat pH and cooking loss. Insulin injection decreased blood glucose concentration but increased meat glycogen and lactate concentration. The longer the resting period prior to slaughtering the lower the live weight but the higher carcass percentage. Blood glucose concentration decreased with the increased resting period prior to slaughtering. Water holding capacity, meat tenderness and meat colour did nor show significant differences.

It was concluded that sucrose supplementation, insulin injection, and resting period prior to slaughtering in sheep exposed to stressful transportation could improve meat quality.

Key words: sucrose, insulin, resting period, transportation, meat quality, sheep.
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